

## **Delaware Greenhouse Gas Reduction Projects Grant Awards**

The Delaware Greenhouse Gas Reduction Projects Grant Program was designed to fund projects or other actions, designed to reduce directly or indirectly Delaware's Greenhouse Gas (GHG) emissions in a measurable, quantifiable and verifiable way. The first announcement of the *Delaware Greenhouse Gas Reduction (GHG) Projects Grant Program* received 36 project proposals totaling over \$5.4 million in requests. In late January 2011, the program awarded \$1.2 Million to 30 of the projects.

### **1. The City of Dover - New Dover Public Library Building Project**

As part of a larger project to build a new Public library, the project will help to implement green design projects in the building. These include Geothermal System with Thermal Storage, Green Roof with Rainwater Harvesting, Building Dashboard System, Water Efficient Landscaping, Energy Efficient Light Fixtures, Daylight Harvesting Fixtures and Motion Sensors, Water Efficient Landscaping, High Performance Glazing, Building Envelope, Exterior Shading Devices, and Enhanced Building Commissioning.

- Award Amount: \$40,000

### **2. Delaware Greenways - Junction and Brakewater Trail Neighborhood Connectivity Plan**

This project includes preparation and implementation of the J & B Connectivity Plan, which is anticipated to be conducted over the course of 18 months, with periodic follow-up (monitoring phase) conducted outside the two year completion window. This project will be done in tandem with a bicycle and trail user survey to begin prior to Phase I of this project.

- Award Amount: \$35,000

### **3. Lewes-Rehoboth Canal Improvement Association - Feasibility Study Regarding Improvements along the Lewes-Rehoboth Canal to Facilitate the Reduction of Greenhouse Gas Emissions**

The Lewes -- Rehoboth Canal Improvement Association (LRCIA) will undertake a study to determine the best means of developing the Lewes -- Rehoboth Canal as a water highway for both residents and visitors. The study will also look at developing a solar powered water taxi system for the canal.

- Award Amount: \$25,000

### **4. Whitehall Ventures – The Villages of Whitehall**

The Villages of Whitehall involves the development of approximately 1,000 acres in southern New Castle County on a 2,000-acre property known as Whitehall. The Villages of Whitehall is being designed under an updated planning model for New Castle County and Delaware. The code is referred to by New Castle County as the "SmartCode." The proposal is for funding of the development of the "Pattern Book" which will highlight the greenhouse gas reduction impact of building these type of developments.

- Award Amount: \$30,000

**5. Lavender Fields Farm, LLC – Demonstration Farm of the Future**

The project includes assistance with the installation of solar panels at the Demonstration Farm of the Future, an educational program to familiarize visitors with the greenhouse gas emission reductions utilizing solar panels and the creation of resource materials for other Delaware agritourism farms to replicate the Demonstration Farm of the Future.

- Award Amount: \$10,000

**6. City of Lewes - Renovation and revitalization of City-owned Lewes Public Library Building**

This project will replace deteriorated windows, replace roof shingles and install up-to-date gutters. The gutters, which are undersized, cause water backup and are believed to contribute to building leakage and deterioration.

- Award Amount: \$30,000

**7. Delaware Technical & Community College – Changing the Transportation Culture of College Commuters**

The project hopes to increase the number of students and employees carpooling or using alternative transportation to the College by 15%. A survey of students and employees will be conducted to identify baseline data for DTCC commuters. A Transportation Coordinator will be hired to manage Delaware Tech's alternative transportation program. Marketing and incentives will encourage program participation. Student and employee volunteers will be recruited to help market the program. The reduction in greenhouse gas emissions will be calculated using software available through DART's RideShare Delaware.

- Award Amount: \$30,000

**8. Safe Haven Animal Sanctuary of Sussex County – Green Roofing Project**

This project will assist with the installation of energy-conserving reflective Thermo Plastic Olefin (TPO) roofing, a cool white membrane that has a reflective value of .85% on the to-be constructed new Safe Haven building.

- Award Amount: \$35,000

**9. Delmarva Wellnet Foundation – EDEN Demonstration Project REPLENISH**

This project is to help to launch REPLENISH. REPLENISH a project for the recovery of organic materials from Rehoboth Beach restaurants for composting, such compost to be used by organic farmers that sell produce to some of the same restaurants. REPLENISH is committed to finding economic and environmental solutions to the recovery of renewable organic materials and converting these materials into viable by-products that have value in the marketplace. The project will also create a website to promote the recovery of organic materials.

- Award Amount: \$35,000

**10. Perdue Farms – Natural Gas Pipeline at Georgetown and Bridgeville Facilities**

The Georgetown project will convert two 500hp boilers from fuel oil to natural gas. The scope of work will include piping the natural gas line onsite, electrical wiring, boiler conversion kits and site preparation. The Bridgeville project will help to convert two 350hp boilers from fuel oil to natural gas. The scope of work will include piping the natural gas line onsite, electrical wiring, boiler conversion kits and site preparation. The objectives of the projects are to burn cleaner fuel, achieve GHG and cost reduction and reduce maintenance costs.

- Award Amt: \$75,000

**11. The Village Improvement Association, Inc.- Retro-Commissioning of the Village Improvement Association Clubhouse**

Specific objectives include: Addition of Solar Panels to the roof, Upgrade all appliances to Energy Star Appliances, Install energy efficient windows and patio doors, Insulate the crawl space, the walls and the space above the ceiling to include upgrading the r value using closed cell foam and Blown Bib in the walls, and the addition of a 13 SEER Heat Pump in conjunction with the existing system.

- Award Amt: \$35,000

**12. Oak Orchard American Legion – Solar Panel Supplementary Project**

This project is for a feasibility study to determine the best option for the legion to enter into a PV Power Purchase Agreement.

- Award Amt: \$10,000 for PPA

**13. Delaware City Fire Company – Complete PV System on Fire House**

This project is to complete the PV system on the fire house and install an information kiosk within the firehouse for educational purposes.

- Award Amt: \$35,000

**14. City of Rehoboth Beach - Rehoboth Beach Alternative Fuel Vehicles Pilot Program**

This project will conduct a Green Fleet Policy feasibility study and provide the cost premium for the purchase of one hybrid vehicle.

- Award Amt: \$15,000

**15. University of Delaware - Colburn Laboratory Green Roof**

The project will install a modular, 2000 ft<sup>2</sup> extensive green roof in order to reduce the daytime heat flux from the black membrane roof atop the Colburn classrooms. The proposal also includes an assessment of effectiveness of green roof in improving indoor climate and energy use.

- Award Amt: \$40,000

**16. University of Delaware - Temporal considerations of carbon sequestration in a degraded early succession forest**

This project has two objectives:

- 1 – Use accepted formulas available primarily through USDA publications to quantify long term carbon sequestration of forest communities comprised of primarily native species, of moderately invaded communities and severely degraded forest communities
- 2 - To develop an infra structure to support community activism for invasive species control to aid natural succession and to promote forest restoration.

- Award Amt: \$25,000

#### **17. Ministry of Caring Inc. – Organizational Climate Action Plan**

The objectives of this project are to develop and implement a set of strategies and actions designed to lower the greenhouse gas emissions of The Ministry of Caring, Inc. on an organization-wide basis by 15% to 20% within two years. Using existing measurable data, a baseline would be established and used as a tool to prioritize the implementation of measures to reduce greenhouse gas emissions and energy use.

- Award Amt: \$25,000

#### **18. Omnia Humanities Inc – Revitalizing 13 acre Kranz Hill Farm**

This project focuses on the expansion of local food production in Newark, Delaware, and surrounding communities in conjunction with educating members of the local community about the carbon cost of conventional food production. In addition, the project proposes to demonstrate and educate the public about techniques for sustainable food production that, as a result, will help them lower their own carbon footprint. The proposed project will provide the necessary equipment and infrastructure to expand the food production capacity of the farm and demonstrate the use and effectiveness of these techniques to the community.

- Award Amt: \$35,000

#### **19. Delaware Nature Society - Delaware Nature Society Solar Electric Photovoltaic Systems**

This project will assist the installation of multiple solar electric arrays at both Ashland Nature Center in Hockessin and Coverdale Farm in Greenville. A 77.875kW system is proposed at Coverdale Farm and a 44.415kW system is proposed for Ashland.

- Award Amt: \$10,000

#### **20. The Nature Conservancy – Carbon Sequestration and Continued Habitat Restoration at Milford Neck**

This project will reforest approx. 60 acres of marginal farm land to native hardwood forest.

The outcomes of this reforestation effort include: (1) measurable greenhouse gas reductions by sequestering significant amounts of carbon beginning with project initiation and over many years as our planted trees grow to a mature native forest and (2) reduction in greenhouse gas emissions associated with operation of farm equipment and transportation of agricultural inputs to the site and products from the site. The project will serve both as a pilot on which to expand the geographic scope and size of future carbon sequestration projects as well as a demonstration project to further understanding of these projects for other organizations and agencies interested in pursuing similar work.

- Award Amt \$99,946

#### **21. The Ministry of Caring Inc – Building Retro-Commissioning of Guardian Angel Child Care and Installation of “Cool” Roof**

This project will include the completion of an energy audit on the child care building and the implementation of the energy conservation measures; including upgrades to water heating, HVAC, lighting, weatherization, and installation of a white roof. The project proposes to reduce the annual GHG for the building by an estimated 28.7% and reduce the annual utility expenses by 25%.

- Award Amt \$50,000

## **22. The Ministry of Caring Inc – Building Retro-Commissioning of St. Veronica Giuliani Monastery**

This project will include the completion of an energy audit on the monastery and the implementation of the energy conservation measures; including upgrades to replace freezers and water heaters, HVAC , lighting and weatherization. The project proposes to reduce the annual GHG for the building by an estimated 30.6% and reduce the annual utility expenses by 30%.

- Award Amt \$50,000

## **23. Delaware Center for Horticulture – The DCH is Growing Greener**

This project is part of a larger project to expand and green DCH's headquarters. The funding will be used to purchase solar shading devices at south facing windows of the addition, an additional inch of roof insulation on the addition, occupancy sensors and daylight sensors throughout the building, mechanical equipment replacement for existing building, light fixture replacement for the existing building, 1,000 square foot photovoltaic array, sub-metering for lighting and mechanical, energy modeling, and re-glazing the skylight at the lobby.

- Award Amt \$50,000

## **24. DE Dept of Agriculture – PV Feasibility Studies and PPA**

This project will conduct a feasibility study between DDA and a licensed engineer to determine the solar energy generation potential at the DDA main office complex and at the Redden State Forest office complex. Using the results of the study, DDA will then install a PV array. Mid-Atlantic Renewable Partners, a renewable energy finance company, will finance the installation of a system and DDA will enter into a power purchase agreement (PPA) to purchase the solar energy generated.

- Award Amt \$30,000

## **25. City of Newark – Cost Premium Purchase for Hybrid Vehicles for Newark Fleet**

The objective of this project is to reduce carbon emissions through the provision of cost premium funding to add hybrid vehicles to Newark's fleet. The project would fund the cost premium for vehicles that are planned to be replaced during the next two years that are appropriate candidates for hybrid replacement.

- Award Amt \$50,000

## **26. Clean Air Council – Green Ports, Healthy Communities**

This project has identified three objectives; assist Wilmington Tug, Inc. to repower one diesel-powered tugboats with more efficient engines; implement an anti-idling campaign, IdleFreeDelaware, beginning at the Port of Wilmington and surrounding Southbridge community; and assist the Port of Wilmington in the replacement of marine terminal light sources with LEDs.

- Award Amt: \$150,000

## **27. City of Rehoboth Beach – Bicycle Plan, Complete Streets Policy and Lighting Retrofits**

This project includes developing a pedestrian and bicycle master plan and replacing 105 pedestrian lights along Rehoboth Avenue. This project would also include a public outreach brochure highlighting these projects.

- Award Amt: \$100,000

#### **28. DE Ornithological Society – Lights Out Wilmington!**

This project will fund an outreach campaign, Lights Out! Wilmington. The objective of Lights Out! Wilmington is to educate large building owners, managers, and tenants of the conservation of migratory birds by reducing building strike mortality through extinguishing exterior and interior perimeter lighting on tall buildings during spring and fall bird migration windows. As an indirect result of extinguishing these lights, participating buildings would realize cost-saving benefits, energy-saving benefits, and contribute to greenhouse gas reduction.

- Award Amt \$11,220

#### **29. DE Biotechnology Institute, UD – Framework for Minimizing Energy Input and Environmental Impact in Delaware**

This project will foster the education of scientists and Delawareans who are well-versed in the need for alternative energy sources and simultaneously interact with teachers and their young students to engage them in learning about sustainable agriculturally-based solutions to our society's energy challenges. The more specific objectives are to:

- a) Develop programs to create a generation of Delawareans (of all ages) who are more knowledgeable about the impact of energy usage and energy sources on the environment;
- b) Foster an interest in young students to pursue education and careers in science and technology to meet current and future energy challenges;
- c) Educate teachers on the state-of-the-art alternative energy technologies and the limitations of those technologies;

- Award Amt \$50,000

#### **30. City of Newark Conservation Advisory Committee – Anti-Idling Education and Outreach Campaign**

The objective of this project is to reduce carbon emissions by educating the Newark driving public about the ordinance and encouraging compliance. A secondary goal is to raise awareness of opportunities to decrease idling where the no-idling ordinance is not in effect such as drive-through lanes (fast food/banks, etc) and at railroad crossings. The campaign will include design and production of education and outreach materials and signage to inform and motivate the driving public, both residents and non-residents and commercial entities who use city streets and public and private parking facilities to decrease or eliminate both illegal and legal idling of their vehicles by 50%.

- Award Amt \$15,000